

REMARKS

Claims 1-33, 54,55 and 58 are currently pending in the application, of which Claims 11-33, 54 and 55 stand withdrawn.

Claim Rejections - 35 U.S.C. §102

Claims 1, 2 and 58 have been rejected under 35 USC 102(b) as being anticipated by Houghton et al. (USPN 5,757,693). The Examiner stated essentially that Houghton teaches all of the limitations of Claims 1, 2 and 58.

Claim 1 claims, inter alia, “a gated diode having a first terminal connected directly to the diffusion region of the at least one transistor and a second terminal connected directly to a read wordline.”

Houghton teaches a gain cell 20 comprising a write transistor Tw0, capacitor C0, storage node SN0, read transistor Tr0, and a diode D0 (see col. 2, lines 30-34). Houghton does not teach “a gated diode having a first terminal connected directly to the diffusion region of the at least one transistor and a second terminal connected directly to a read wordline” as claimed in Claim 1. Houghton teaches that current is gated from BLR0 thru diode D0 and read transistor Tr0 (see FIG. 1 and col. 3, lines 10-11). The Examiner interprets the read transistor Tr0 to be a diode; respectfully, this interpretation has no support in the specification. Indeed, Houghton is clear on the metes and bounds of the term “diode”, labeling the diode as D0. It is clear from FIG. 1 of Houghton that the diode D0 is connected between a bitline and a transistor. Clearly, Houghton’s diode does not include a terminal connected directly to a wordline. Accordingly, Houghton fails to teach all the limitations of Claim 1.

Regarding the Response to Arguments; the Examiner stated essentially that “every transistor comprises a diode and a gate; therefore every transistor comprises a gated diode.” Respectfully, the description of a transistor, typically a bipolar junction transistor (BJT) as

including two diodes with a junction there-between is an analogy commonly used for purposes of explaining the workings of a BJT. This analogy is a fiction; diodes cannot be connected to form a BJT, for example, because a junction of the transistors comprises charge carriers of different polarities. Similarly, any analogy used in explaining a field-effect transistor (FET) is a fiction. A FET, while sometimes behaving as a diode, does not comprise a diode. The structure of a transistor, whether a BJT or FET, cannot in any real world sense be said to include a diode, much less the claimed diode “having a first terminal connected directly to the diffusion region of the at least one transistor and a second terminal connected directly to a read wordline.” Therefore, Houghton fails to teach all the limitations of Claim 1.

Claims 2 and 58 depend from Claim 1. The dependent claims are believed to be allowable for at least the reasons given for Claim 1.

Claims 3-10 are rejected as being unpatentable over Houghton in view of Hsu (US 2003/0147277). The Examiner stated essentially that the combined teachings of Houghton and Hsu teach or suggest all the limitations of Claims 3-10.

Claims 3-10 are patentable over the combined teachings of Houghton and Hsu at least by virtue of their dependence from Claim 1. Withdrawal of the rejection is respectfully requested.

For the forgoing reasons, the present application, including Claims 1-33, 54,55 and 58, is believed to be in condition for allowance. Early and favorable reconsideration of the rejections is respectfully urged.

Respectfully submitted,

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